

FIRST REPORT OF *Thelyphonus sepiaris* (BUTLER, 1873) (ARACHNIDA: UROPYGI: THELYPHONIDAE) FROM MADHYA PRADESH, INDIA

Talmale, S. S. ¹, S.R. Patil² and S. Sambath

Zoological Survey of India, Central Zone Regional Centre, 168-169, Scheme No. 5, Vijaynagar, Jabalpur-482002, Madhya Pradesh

Corresponding Authors: 1.E-mail : s_talmale@yahoo.co.in

2 E-mail : srpatil17@gmail.com

ABSTRACT

The present investigation is a study of *Thelyphonus sepiaris* (Butler, 1873) from a Veerangana Durgawati Wildlife Sanctuary in Damoh district of Madhya Pradesh. The study also reveals that the present collection of the species is a new record for Madhya Pradesh and also extends its range of distribution towards north in the Central India.

Key words: Uropygi, *Thelyphonus sepiaris*, Madhya Pradesh, Range extension.

INTRODUCTION

The Order Uropygi is characterized by prosoma which is longer than broad and is covered by an undivided carapace possessing 8 or 12 eyes. They are distinct from scorpions by the presence of deep constriction between cephalothorax and abdomen, by the absence of pectines or combs on the sternal area and of poison-glands in the postanal skeletal piece (Pocock, 1900). The members of this order are commonly referred as 'Whip-scorpions' as a long whip-like jointed telson present, which is homologous to the sting of Scorpion and the very short flagellum of Schizomida. In Uropygids opisthosomatic glands secrete formic and acetic acid which are the animal's very characteristic mode of self-defence (Savory, 1964).

The Uropygids are globally recognized by 103 species under 16 genera (Harvey, 2002; 2003) and represented by 19 species under 6 genera from the Indian subcontinent (Pocock, 1900) of which only 6 species of 4 genera have so far been described from India (Bastawade, 1987). This is the first record of the Whip-scorpion *Thelyphonus sepiaris* (Butler, 1873) from a Veerangana Durgawati Wildlife Sanctuary in Madhya Pradesh reported during a faunistic survey. Perusal of literature shows that there is no record of this species from Madhya Pradesh. The present paper deals with a short description of *Thelyphonus sepiaris* (Butler, 1873) (Fig.1) and its range extension to known distribution.

MATERIALS AND METHODS

Material Examined: One young female specimen of the Whip-scorpion *Thelyphonus sepiaris* (Butler, 1873) was collected from a locality known as Singhorgarh Tal surroundings near famous Singhorgarh Fort (Latitude N 23°32.147' Longitude. E 079°44.852' Altitude 1586 ft) in Veerangana Durgawati Wildlife Sanctuary, Damoh district, Madhya Pradesh on 18th July 2011 by the first author



Fig. 1, *Thelyphonus sepiaris* (Butler, 1873) : Female (in life)



Fig.2, Ocular Keel on dorsal anterior region of thorax



Fig.3, First abdominal sternum with its posterior border strongly and convexly produced, Female (ventral view)



Fig.4, Pedipalp coxa showing maxillary process with tooth (Ventral view)



Fig.5, Trochanter of right pedipalp showing 6 teeth (Dorsal view)

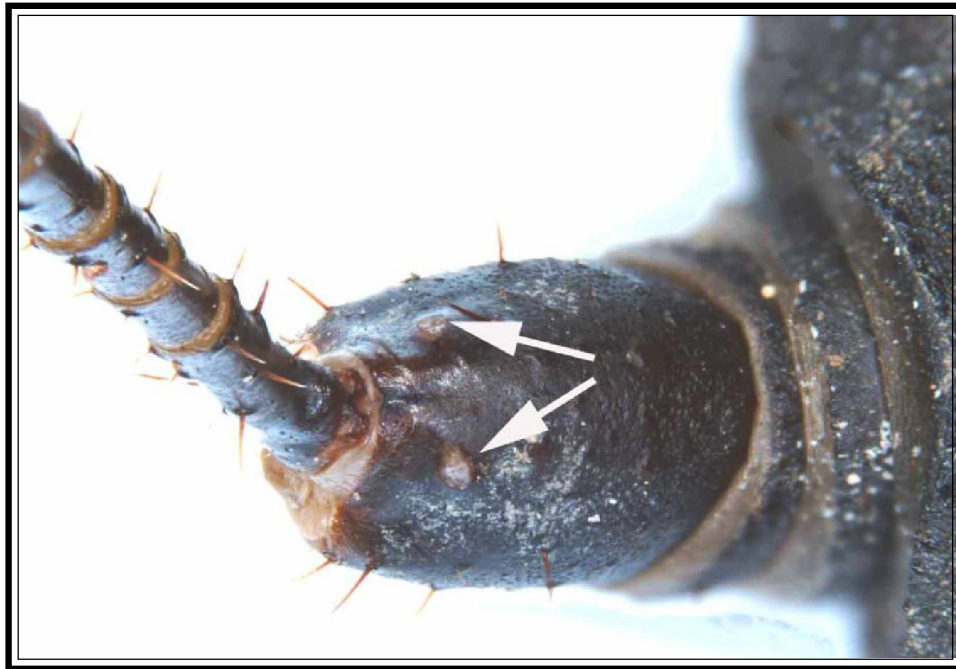


Fig.6, Last anal segment showing a pair of ommatoids (Dorsal view)



Fig.7, Location map showing distribution of *Thelyphonus sepiaris* (Butler) in 1. Jaffna(Sri Lanka), 2. Chennai (Tamil Nadu), 3. Peddacheruvu, 4. Tadwai, 5. Perantalapally (Andhra Pradesh), 6. Amarkantak Biosphere Reserve (Chhattisgarh) and 7. Singhorgarh (Madhya Pradesh, Present record) (Map courtesy: Google Earth, 2012).

(SST) and preserved in rectified spirit. The specimen was studied and deposited in Wet Collection of the Zoological Survey of India, CZRC, Jabalpur, M. P. (Registration No. ZSI/CZRC/A/16374). The specimen was found under stone near the bank of lake and habitat is tropical dry deciduous forest, typical to the Central India. The photographs are taken using Digital camera (Sony DSC-W380) in the field and LEICA M205A Stereozoom Microscope in the laboratory.

Description

Colour black or blackish brown above and on pedipalp, reddish brown below; legs black, with tibiae and tarsi red-brown. Carapace and terga coarsely rugose, with close-set punctures and granules, a smooth paler median line present on 2nd and 3rd and just traceable on posterior terga (Fig.1). Distinct ocular keel or ridge extends along the margin of the carapace between the median and lateral eyes of each side (Fig.2). Sterna smooth, punctured and scratched with transverse lines. First abdominal sternum with its posterior border strongly and convexly produced (Fig. 3). Pedipalp: maxillary process of coxa internally shouldered with one strong and short tooth (Fig. 4); femur and tibia granular below, polished and punctured above; trochanter granular above, armed below with 2 teeth and 6 above (Fig.5). Teeth on trochanter and femur of pedipalp larger; hand narrower than tibia; movable finger without subapical tooth. Tarsal segments of 1st leg unmodified. Legs of 2nd, 3rd and 4th pairs with tibial spine. The last anal segment is with two ommatoids, without dark sclerotized spot near the centre (Fig. 6). Telson or caudal flagellum hairy with 27 segments. Body length is about 20 mm (excluding pedipalp and telson); while telson measures about 26 mm. Based on this description the specimen was identified as a young female of *Thelyphonus sepiaris* (Butler, 1873).

RESULTS AND DISCUSSION

Thelyphonus sepiaris (Butler, 1873) is endemic to Deccan in Oriental region. In India, it is reported from Tamil Nadu (Pocock, 1900), Andhra Pradesh (Javed, *et al.*, 2009), and Chhattisgarh (Sharma and Chandra, in press). It shows wide range of distribution in Peninsular India. After reviewing available literature for distribution of *Thelyphonus sepiaris* (Butler, 1873) is recorded for the first time from Madhya Pradesh and also confirms its range of extension further north up to Madhya Pradesh in the Central India (Fig. 7).

ACKNOWLEDGEMENTS

Authors are grateful to Dr. K. Venkatraman, Director, Zoological Survey of India, Kolkata for providing facilities and encouragement. They are also thankful to Shri. M. E. Limje, Photographer and Shri. Ramdayal Patel, Collection Tender who assisted during the field work. Thanks are due to the Principal Chief Conservator of Forests, Bhopal for permission to collection and survey of the areas and also thanks to the DFO, Damoh to provide facilities and accommodation during the surveys.

REFERENCES

- Bastawade, D. B. 1988. A first report of an Arachnid order Uropygida (Whip Scorpion) from Maharashtra. *J. Bombay Nat. Hist. Soc.* 85 (3): 648-649.
- Butler, 1873 : *Description of several new species of Thelyphonus*. Cistula Entomologica, Vol. 6, p. 129-132
- Harvey, M.S. 2002. The neglected cousins: What do we know about the smaller arachnid orders? *The Journal of Arachnology*. 30: 357-372.
- Harvey, M.S. 2003. Catalogue of the Smaller Arachnid Orders of the World. *CSIRO Publishing, Victoria, Australia*. 385pp.
- Javed, S.M.M.; K.T. Rao; F. Tampal and C. Srinivasulu. 2009. First record of *Thelyphonus sepia* Butler, 1873 (Uropygi: Thelyphonidae) from Andhra Pradesh, India. *Journal of Threatened Taxa*. 1(7):395-397.
- Pocock, R.I. 1900. Fauna of British India, Arachnida. *Taylor and Francis, London*. 279pp.
- Rowland, J.M. and J.A.L. Cooke 1973. Systematics of the arachnid order Uropygida (Thelyphonida). *The Journal of Arachnology*. 1:55-71.
- Savory, T. 1964. Arachnida. *Academic Press, London and New York*. 291pp.
- Sharma, R.M. and K. Chandra. (in press). First Report of *Thelyphonus sepia* Butler, 1873 (Arachnida: Uropygi: Thelyphonidae) from Chhattisgarh, Central India. *Rec. Zool. Surv. India. Kolkata*.